

**FORTINET®**



# FortiAP 231F

QuickStart Guide



August 24, 2020

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## Product Registration

Thank you for purchasing a FortiAP. To access:

- Cloud Management
- FortiGuard Updates
- Firmware Upgrades
- Technical Support
- Warranty Coverage

Please register your FortiAP device:

Vous devez enregistrer le produit:

Debe registrar el producto:

登録のお願い:

请马上注册:

<http://support.fortinet.com>

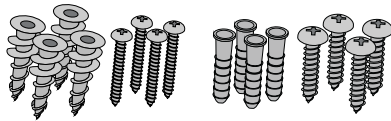
# Package Contents



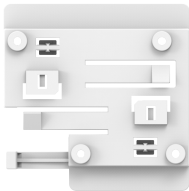
FortiAP 231F Device



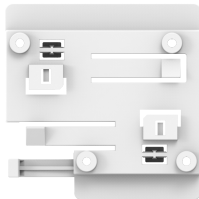
QuickStart Guide



8 x Mounting Screws with 8 x Anchors



9/16" Ceiling Mounting Bracket



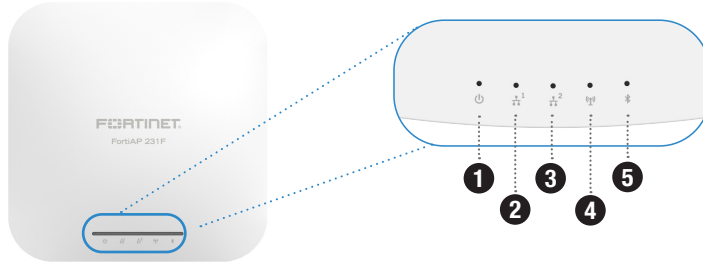
15/16" Ceiling Mounting Bracket

# Interfaces



- 1** **OPTIONAL POWER (12V DC)** Optional 12V DC 2.5A adapter
- 2** **RESET** resets the device
- 3** **CONSOLE (RJ-45)** CLI management computer interface
- 4** **LAN2 GE (RJ-45)** 1 Gbps Ethernet interface
- 5** **LAN1/POE GE (RJ-45)** 1 Gbps 802.3at PoE Ethernet interface
- 6** **USB 3.0 (Type A)** software enabled power through the GPIO, 9A/5V

# LED Indicators



## 1 Power (PoE 802.3at or 12V DC 2.5A)

- Off:** Device is off
- Green:** Device is on
- Blinking Green:** Booting up
- Orange:** Reserved for customizations

## 2 LAN 1 (1 Gbps 802.3at PoE RJ45)

- Off:** Link is off
- Green:** Link is on
- Blinking Green:** Transmitting at 1Gbps
- Blinking Orange:** Transmitting at 100Mbps

## 3 LAN 2 (1 Gbps RJ45)

- Off:** Link is off
- Green:** Link is on
- Blinking Green:** Transmitting at 1Gbps
- Blinking Orange:** Transmitting at 100Mbps

## 4 WiFi (5GHz & 2.4GHz 2x2 MU-MIMO)

- Off:** Radio 1 & 2 are off
- Blue:** Radio 1 is on
- Blinking Blue:** Radio 1 is transmitting data
- Orange:** Radio 2 is on
- Blinking Orange:** Radio 2 is transmitting data
- Green:** Radio 1 & 2 are on
- Blinking Green:** Radio 1 & 2 are transmitting data

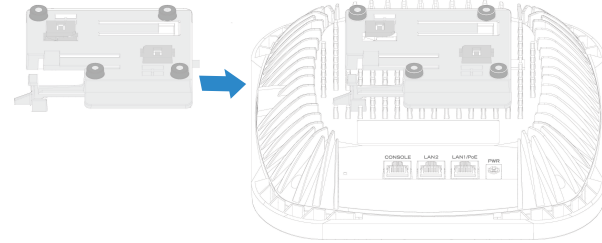
## 5 Bluetooth Low Energy (BLE) & WiFi

- Off:** BLE & Radio 3 are off
- Blue:** BLE is on
- Blinking Blue:** BLE is transmitting data
- Orange:** Radio 3 is on
- Blinking Orange:** Radio 3 is transmitting data
- Green:** BLE & Radio 3 are on
- Blinking Green:** BLE and Radio 3 are transmitting data

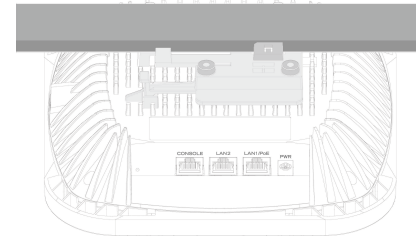
# Ceiling Installation

The FortiAP mounts on a ceiling using the provided T-rail mounting brackets which come in two standard sizes: 1.43cm (9/16in) and 2.38cm (15/16in)

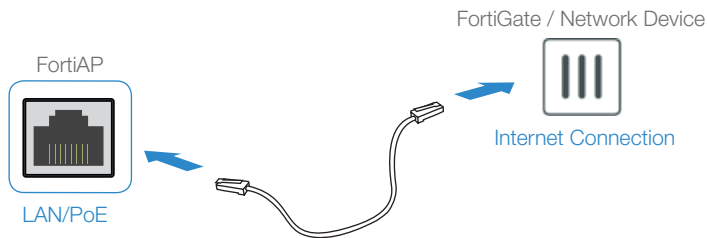
1. Select the **bracket** for the **T-rail size**: 1.43cm (9/16in) or 2.38cm (15/16in)
2. With the ports facing you, **slide the bracket left to right**



3. Hold the device **against the ceiling T-rail** and **push until it snaps** into place



# Basic Connections



1. Connect the FortiAP device to a [FortiGate controller](#) or an [Internet connection](#)
2. Ensure that the [Power over Ethernet \(PoE\)](#) cable is connected to an applicable port on your [FortiGate](#) device or [PoE injector](#)

**Optional:** If you are not using PoE, connect the DC plug of the optional power 12V 2.5A power adapter into the FortiAP power jack and the AC plug from the adapter into a power outlet.

**Warning:** This device complies with [IEEE 802.3af/at](#) PoE specification. Do not use any [PoE injectors](#) that are not [IEEE 802.3at compliant](#) as they may damage your device.

# Device Setup

Set up your device locally or on the cloud. Choose one of the following options to complete your setup and configure your device.



## FortiAP Cloud

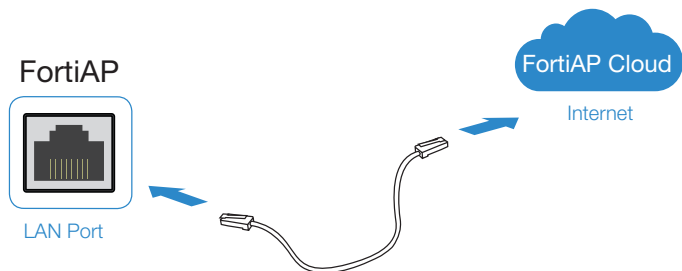
FortiAPCloud is a [cloud-based](#) FortiAP [management solution](#) and log retention service. It provides centralized reporting, traffic analysis, configuration management, and log retention.



## FortiGate Deployment

Your FortiAP can be [preauthorized](#) and [configured](#) using a [FortiGate](#). You can also authorize your FortiAP after you have connected it to the same network. If the FortiGate is not on the same network as the FortiAP, you can [log directly into the AP](#) and authorize it via the [CLI](#).

# FortiAP Cloud



1. Log in to [fortiapcloud.com](https://fortiapcloud.com) using your FortiCloud credentials
2. Click [Inventory](#), then click [Import AP Key](#)

Add AP

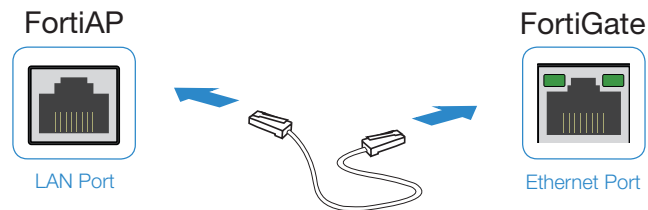
Please input the FortiAPCloud Key to add an AP:

Submit

3. Input the [Cloud Key](#) located on the [sticker](#) on your device

**Info:** Refer to the "Access Point Configuration" section of the FortiWiFi and FortiAP Configuration Guide found at <https://docs.fortinet.com/product/fortiap>

# FortiAP Deployment



If the FortiGate is on the same network as the FortiAP:

1. [Preauthorize](#) your [FortiAP](#) device using your [FortiGate](#)
2. [Plug](#) the [FortiAP](#) into your local [Ethernet](#) connection
3. The [FortiAP](#) will [self-configure](#)

Or

1. Instead of preauthorizing, [authorize the FortiAP](#) device [after you have connected](#) the [FortiAP](#) to the network
2. Within two minutes of connecting the FortiAP to your FortiGate, the device will appear on the [Managed FortiAP](#) page in the [GUI](#) to [authorize](#) and [assign](#) a profile

If FortiGate is not on the same network as the FortiAP:

1. [Log in](#) to the FortiAP directly (IP address: [192.168.1.2](#)) with username [admin](#) and [no password](#), and specify the [IP address](#) of the controlling FortiGate
2. Specify the [IP address](#) of the controlling FortiGate:  

```
cfg -a AC_IPADDR_1=0.0.0.0
```

```
cfg -c
```

where [0.0.0.0](#) is the address of the FortiGate
3. The FortiAP device connects to the FortiGate, and then you can [authorize](#) the FortiAP

## Cautions and Warnings

### Environmental specifications

Ambient operating temperature: 0°C to 45°C.

*Refer to specific Product Model Data Sheet for Environmental Specifications (Operating Temperature, Storage Temperature, Humidity, and Altitude).*

*Référez à la Fiche Technique de ce produit pour les caractéristiques environnementales (Température de fonctionnement, température de stockage, humidité et l'altitude).*

### Safety

**Caution:** This equipment is to be used in a Network Environment 0 per IEC/ET 62101. This product is connected only to PoE networks without routing to the outside plant.

**Attention:** Ce matériel doit être utilisé dans un Environnement Réseau 0 par IEC/ET 62101. Ce produit est uniquement connecté aux réseaux PoE sans installation externe de routage.

This product is intended to be supplied by a Listed Direct Plug-In Power Unit marked LPS or Class 2 and rated 12 Vdc, 2.5A or by 54 Vdc from PoE source.

Le produit doit être alimenté par un bloc d'alimentation à courant continu homologué UL de 12 Vdc, 2.5A nominal marqué LPS ou Class 2 ou par une source d'alimentation par Ethernet de 54 Vdc (PoE).

## Regulatory Notices

### Federal Communication Commission (FCC) – USA

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received; including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**WARNING:** Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 44cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

**Caution:** Operation of this device is restricted to indoor use only.

For operation within 5.15 – 5.25GHz frequency range, it is restricted to indoor environment.

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

### Industry Canada Equipment Standard for Digital Equipment (ICES) – Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

### Innovation, Science and Economic Development (ISED) – Canada

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- 1.This device may not cause interference.
- 2.This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- 1.L'appareil ne doit pas produire de brouillage;
- 2.L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

For product available in the USA/Canada market, only channel 1–11 can be operated. Selection of other channels is not possible.

Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20cm de distance entre la source de rayonnement et votre corps.

The maximum antenna gain permitted for devices in the band 5725–5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate.

Le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5725–5850 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.

**Caution:** The device for the band 5150–5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

**Attention:** Le dispositif de la bande 5150–5250 MHz est réservé à un usage intérieur afin de réduire l'interférence nuisible potentielle aux systèmes mobiles par satellite co-canal.

(iii) where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

(iii) lorsqu'il y a lieu, les types d'antennes (s'il y en a plusieurs), les numéros de modèle de l'antenne et les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, énoncée à la section 6.2.2.3, doivent être clairement indiqués.

This radio transmitter (IC: 7280B-3417T0696 / Model: FAP-231F) has been approved by ISED to operate with the antenna type listed below with maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (IC: 7280B-3417T0696 / Model: FAP-231F) a été approuvé par ISED pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

This device and it's antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with IC multi-transmitter product procedures.

Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionner en association avec une autre antenne ou transmetteur.

#### For model: FAP-231F

Antenna Type	PIFA					
Antenna Connector	IPEX					
Antenna No.	Gain (dBi)					
	2400MHz	2450MHz	2500MHz	5150MHz	5500MHz	5850MHz
DL1	4.04	4.36	4.79	6.21	6.33	5.25
DL2	5.52	5.29	5.19	5.07	5.99	5.03
DL3	4.34	5.06	5.05	5.30	5.15	5.18
DL4	4.72	4.66	5.62	5.34	6.37	5.85
Scanning	4.93	4.60	5.22	5.06	5.09	5.14
BT	4.23	4.66	4.71	-	-	-

### European Conformity (CE) – EU

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.



The product transmits within the frequency ranges and less than or equal to the power listed below:  
2412–2472 MHz less than 20 dBm  
5180–5240 MHz less than 23 dBm  
5260–5320 MHz less than 23 dBm \*  
5500–5700 MHz less than 30 dBm \*

Note: \* Only with DFS bands certification.

This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

### Simplified EU Declaration of Conformity

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#### Български

Този продукт е в съответствие с Директива 2014/53/EC.

#### Česky

Tento produkt je v souladu se směrnicí 2014/53/EU.

#### Dansk

Dette produkt er i overensstemmelse med direktiv 2014/53/EU.

#### Deutsch

Dieses Produkt entspricht der Richtlinie 2014/53/EU.

#### Eesti

See toode vastab direktiivile 2014/53/EL.

#### English

This product is in compliance with Directive 2014/53/EU.

#### Español

Este producto cumple con la Directiva 2014/53/UE.

#### Ελληνική

Το προϊόν αυτό συμμορφώνεται με την Οδηγία 2014/53/ΕΕ.

#### Français

Ce produit est conforme à la Directive 2014/53/UE.

#### Hrvatski

Ovaj proizvod je u skladu s Direktivom 2014/53/EU.

#### Italiano

Questo prodotto è conforme alla Direttiva 2014/53/UE.

## Latviski

Šis produkts atbilst Direktīvai 2014/53/EU.

## Lietuvių

Šis gaminyas atitinka direktyvą 2014/53/ES.

## Malta

Dan il-prodott huwa konformi mad-Direttiva 2014/53/UE.

## Magyar

Ez za termék megfelel a 2014/53/EU irányelvnek.

## Nederlands

Dit product is in overeenstemming met Richtlijn 2014/53/EU.

## Norsk

Dette produktet er i samsvar med direktiv 2014/53/EU.

## Polski

Ten produkt jest zgodny z dyrektywą 2014/53/UE.

## Português

Este produto está em conformidade com a Diretiva 2014/53/UE.

## Rumunski

Acest produs este în conformitate cu Directiva 2014/53/EU.

## Slovensky

Tento produkt je v súlade so smernicou 2014/53/EÚ.

## Slovensko

Ta izdelek je v skladu z Direktivo 2014/53/EU.

## Suomi

Tämä tuote on direktiivin 2014/53/EU mukainen.

## Svenska

Denna produkt överensstämmer med direktiv 2014/53/EU.

Note: The full declaration of conformity for this product is available at the link below:

<https://site.fortinet.com/ProductRegulatory/EU>

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